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December 3, 2004

Mail Stop Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate
DEC 14 2004
of Correction

Re: U.S. Patent No.: 6,816,591 B2
Issued: November 9, 2004
Inventor: Yasuhiro Terada et al.
Our Docket: 33856

Sir:

A Certificate of Correction under 35 U.S.C. 254 is hereby requested to correct Patent Office printing errors in the above-identified patent. Enclosed herewith is a proposed Certificate of Correction (Form No. PTO-1050) for consideration along with appropriate documentation supporting the request for correction.

It is requested that the Certificate of Correction be completed and mailed at an early date to the undersigned attorney of record. The proposed corrections are obvious ones and do not in any way change the sense of the application.

We understand that a check is not required since the errors were on the part of the Patent and Trademark Office in printing the patent.

Very truly yours,

Michael W. Garvey, Reg. No. 35878

MWG:vln
Enclosures

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Michael W. Garvey
Name of Attorney for Applicant(s)

December 3, 2004
Date

Signature of Attorney

DEC 15 2004

PTO/SB/44 (07-03)
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,816,591 B2 PAGE 1 OF 1
DATED : November 9, 2004
INVENTOR(S) : Yasuhiro Terada et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the cover page

Item (30), Foreign Application Priority Data, please delete "Apr. 14, 2000" and insert therefor - -Aug. 14, 2000- -.

Column 3

Line 23, please delete "βh" and insert therefor - -αh- -.

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PATENT NO. 6,816,591 B2

No. of additional copies
⇨ 0

DEC 15 2004

APPLICATION DATA SHEET

Electronic Version 0.0.11
Stylesheet Version: 1.0

Publication Filing Type: new-utility
Application Type: utility
Title of Invention: VOICE SWITCHING SYSTEM AND VOICE SWITCHING METHOD
Attorney Docket Number: 33856

Attorney Docket Number: 33856

Legal Representative:
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Foreign Priority:

JP	2000-08-14	2000-245816	Priority Claimed

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receiving-side voice detection processing section 707 will appear because the receiving-side voice detection processing section 707 and the transmitting-side voice detection processing section 713 are operated in the same manner.

In the signal level computing section 708, the amplitude level of a reception signal in each sample or frame (multiple samples) is computed to obtain a signal level Lri(k) in which the legend "k" represents a sample number or a frame number. In the time constant selecting section 709, a time constant "Tr" is determined according to the amplitude level of the reception signal. In the minimum signal level computing section 710, a minimum reception signal level Nr(k) is computed by the smoothing processing of the following equation 1 using this time constant.

$$Nr(k) = Nr(k-1) + Tr(Lr(k) - Nr(k-1)) \quad \text{.....(equation 1)}$$

In the threshold computing section 711, a threshold "Thr" for voice detection is computed by the following equation 2 based on the minimum reception signal level Nr(k),

$$Thr = \alpha \cdot Nr(k) \quad \text{... (equation 2)}$$

wherein the legend "α" is indicative of a coefficient for computing the threshold.

In the voice detecting section 712, the reception signal level Lri(k) is compared with the threshold "Thr", and when the reception signal level is higher than the threshold, it is determined that a voice is present, while when the reception signal level is lower than the threshold, it is determined that no voice is present.

The methods of computing and controlling the losses in the loss controlling section 719 will then be described hereinafter.

The loss controlling section 719 is firstly operated to have a transmission signal level Lsi(k) compared with a reception output signal level Lro(k) obtained by multiplying the reception signal level Lri(k) by a receiving-side loss "Gr", and a sound echo path gain "αh" is computed by the following equation.

$$\alpha h = Lsi(k)/Lro(k) \quad \text{... (equation 3)}$$

The loss controlling section 719 is similarly operated to have a reception signal level Lri(k) compared with a transmission output signal level Lso(k) obtained by multiplying the transmission signal level Lsi(k) by a transmitting-side loss Gs, and a circuit echo path gain "βh" is computed by the following equation.

$$\beta h = Lri(k)/Lso(k) \quad \text{... (equation 4)}$$

Computed by the following equation with the sound echo path gain "αh" and the circuit echo path gain "βh" is an insertion loss "G",

$$G = Hm/(Mc \cdot \alpha h \cdot \beta h) \quad \text{... (equation 5)}$$

wherein Mc is a correction coefficient and "Hm" is a howling margin.